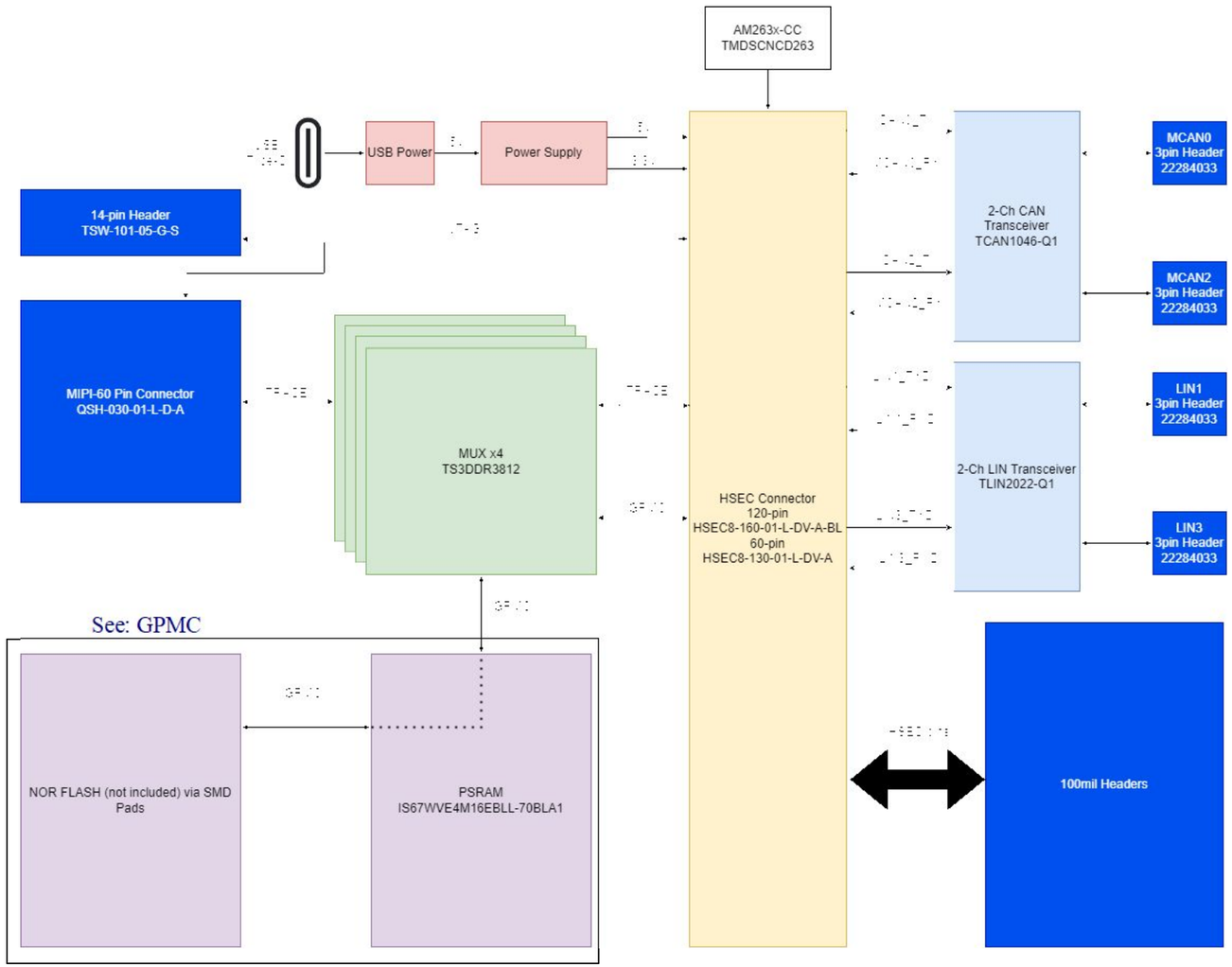
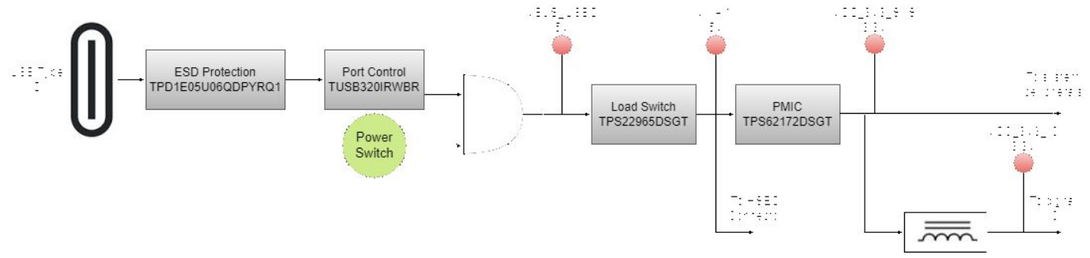
Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A

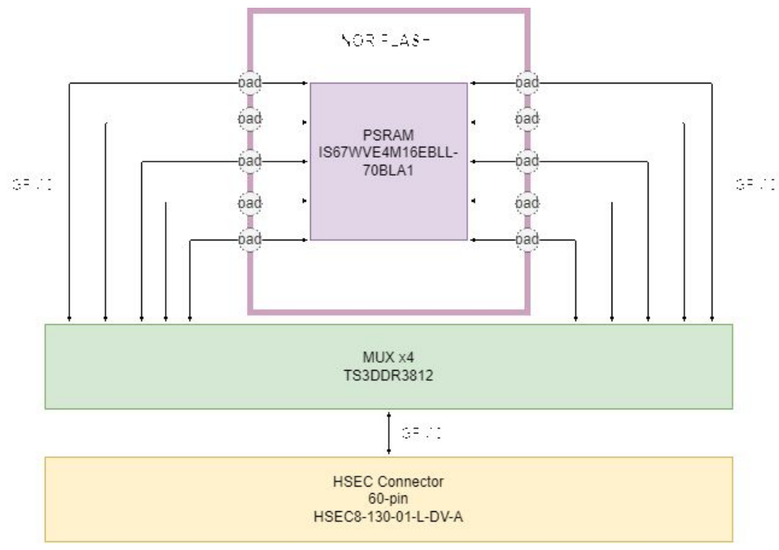
System I/O



Power



GPMC



Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 9/28/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 1 of 9
Drawn By:		File: PROC148A_BlockDiagram.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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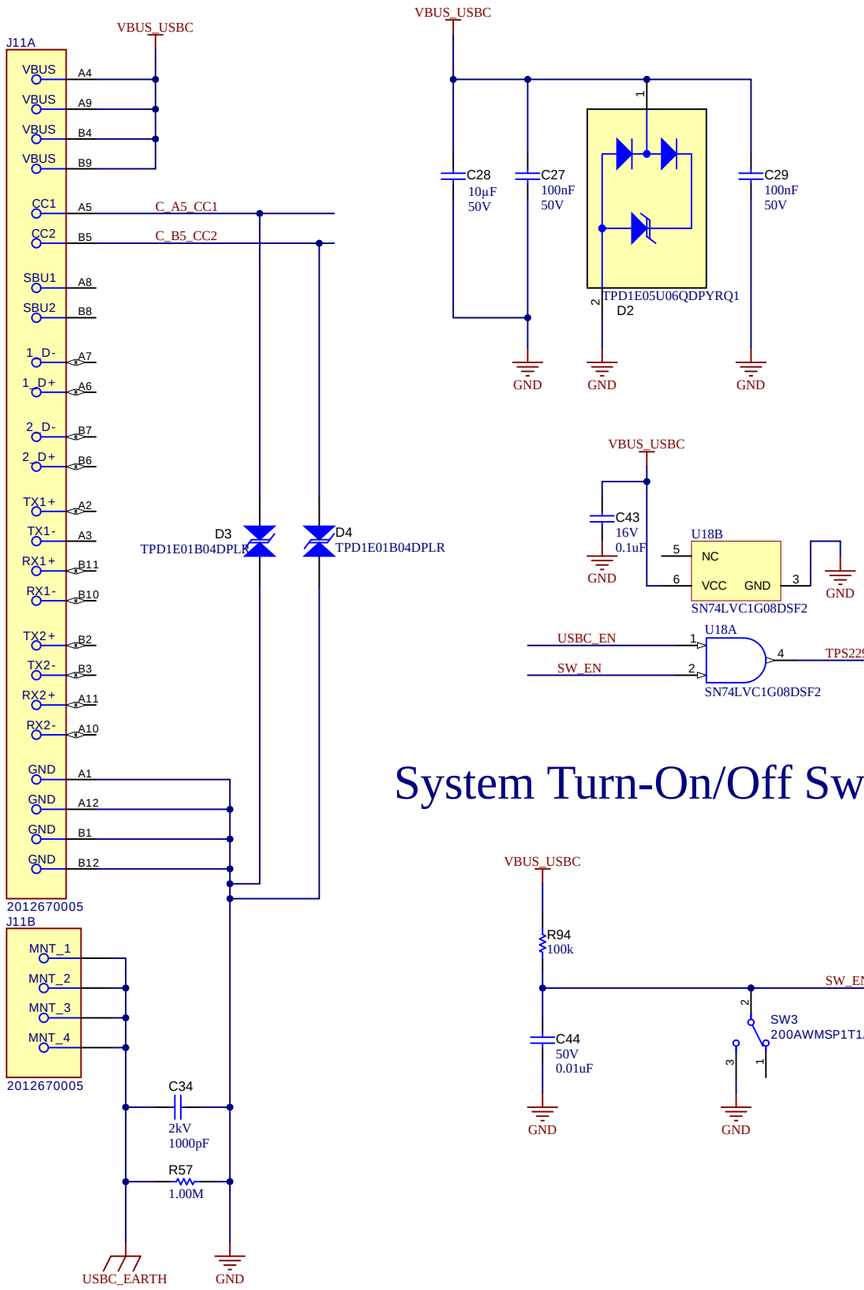
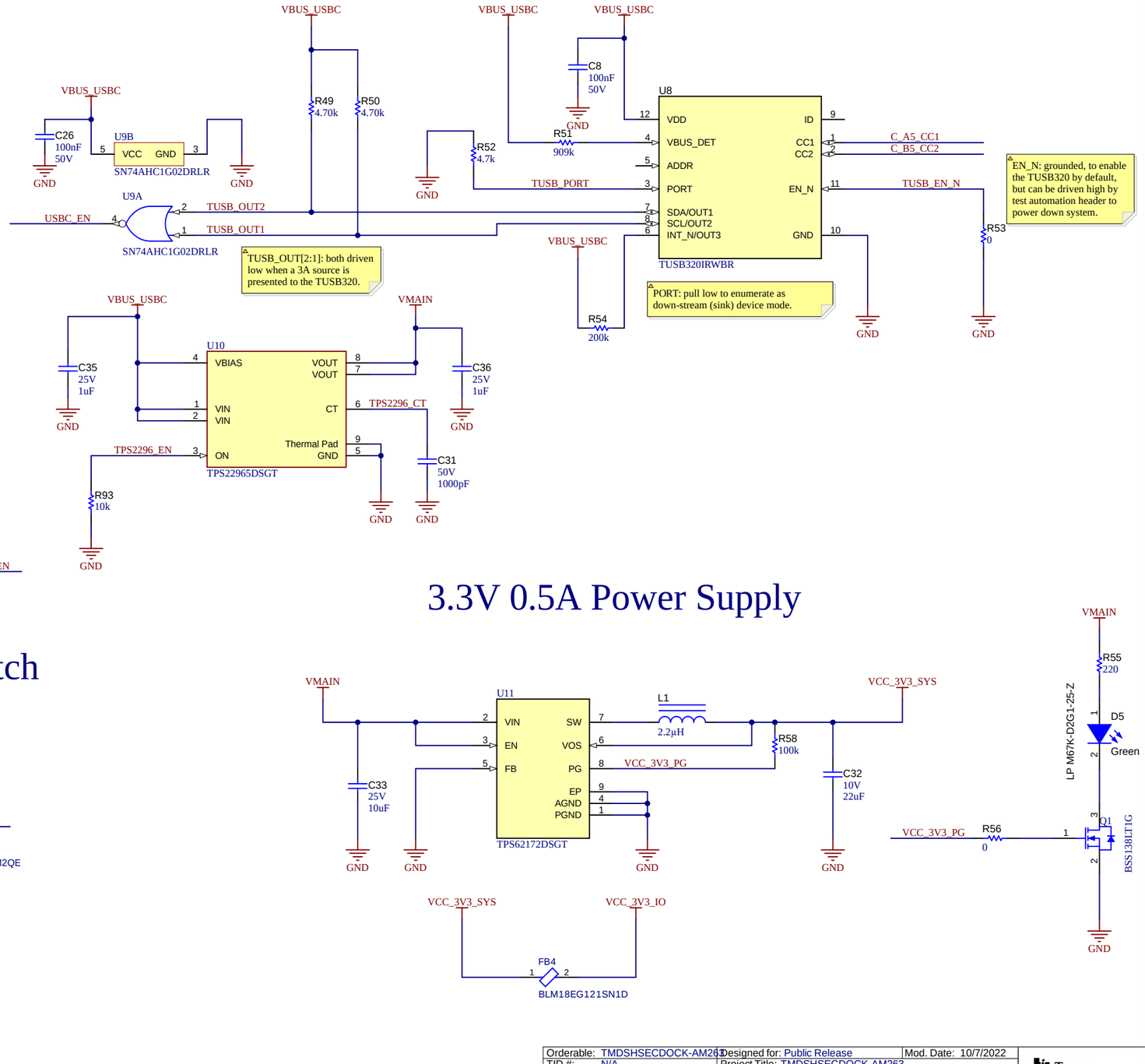
USB-C Power

Configured as UFP MODE To Detect 5V/3A Source

USB-C Connector



System Turn-On/Off Switch



3.3V 0.5A Power Supply

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Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 10/7/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 2 of 9
Drawn By:		File: PROC148A_PWR.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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180-Pin HSEC Connector

Off-sheet connected signals are used in breakout board peripherals. All HSEC signals are to be broken out to 100mil headers.

HSEC8-160-01-L-DV-A-BL

HSEC8-130-01-L-DV-A

Off-sheet Connections

HSEC_TMS, HSEC_TCK, HSEC_TDI, HSEC_TDO, HSEC_TRC_CLK, HSEC_TRC_CTL

HSEC_GPIO43, HSEC_GPIO44, HSEC_GPIO45, HSEC_GPIO46, HSEC_GPIO47, HSEC_GPIO48, HSEC_GPIO49

HSEC_LIN1_TXD, HSEC_LIN1_RXD, HSEC_LIN3_TXD, HSEC_LIN3_RXD

HSEC_MCAN0_RX, HSEC_MCAN0_TX, HSEC_MCAN2_RX, HSEC_MCAN2_TX

ADC Channel Variable Resistors

SH-J1 connect J18-2 and J18-3 by default

SH-J2 connect J22-2 and J22-3 by default

PTV09A-8025U-B103

ADC Signal Conditioning

OPA2837DGK

SH-J3 connect J65-1 and J65-2 by default

SH-J4 connect J65-1 and J65-2 by default

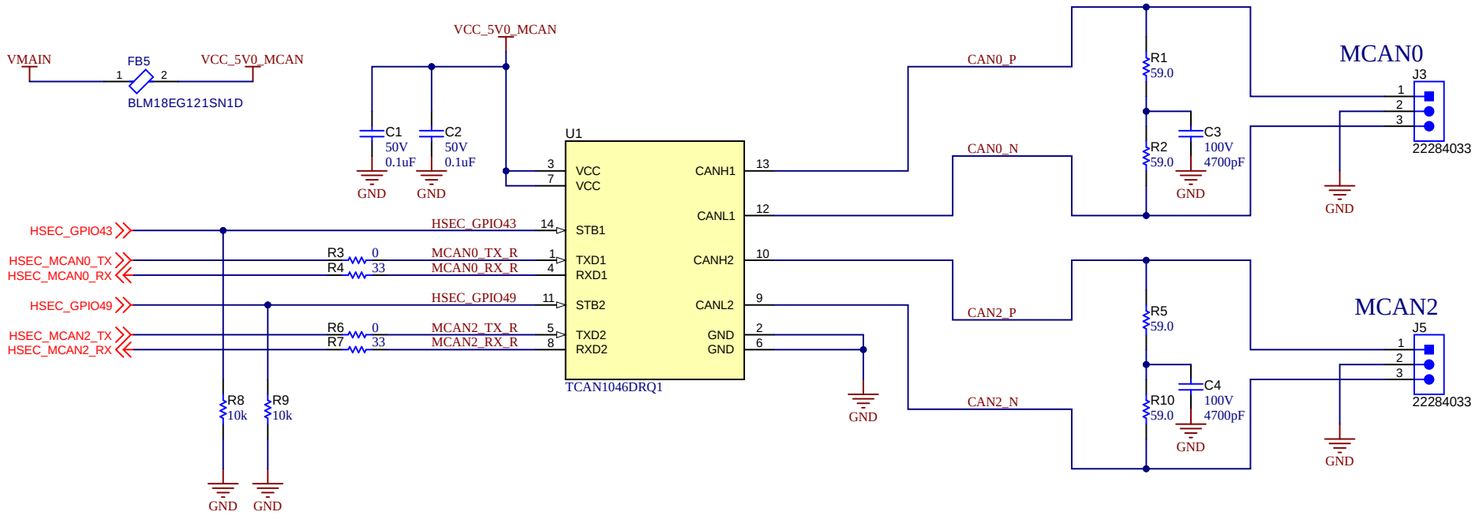
Place ground return pins 1:1 with ADC channels

Place GND return pins 1:4 with HSEC signals

Place GND return pins 1:4 with HSEC signals, DNP J31, J32

Orderable: TMDSHSECDOCK-AM263	Designed for: Public Release
TID #: N/A	Project Title: TMDSHSECDOCK-AM263
Number: PROC148 Rev: A	Sheet Title:
SVN Rev:	Assembly Variant: 001 Sheet: 3 of 9
Drawn By:	File: PROC148A_HSEC.SchDoc Size: C
Engineer: Brennan Hartigan	Contact: http://www.ti.com/support

MCAN BREAKOUT



LIN BREAKOUT

Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 11/1/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 4 of 9
Drawn By:		File: PROC148A_CAN_LIN.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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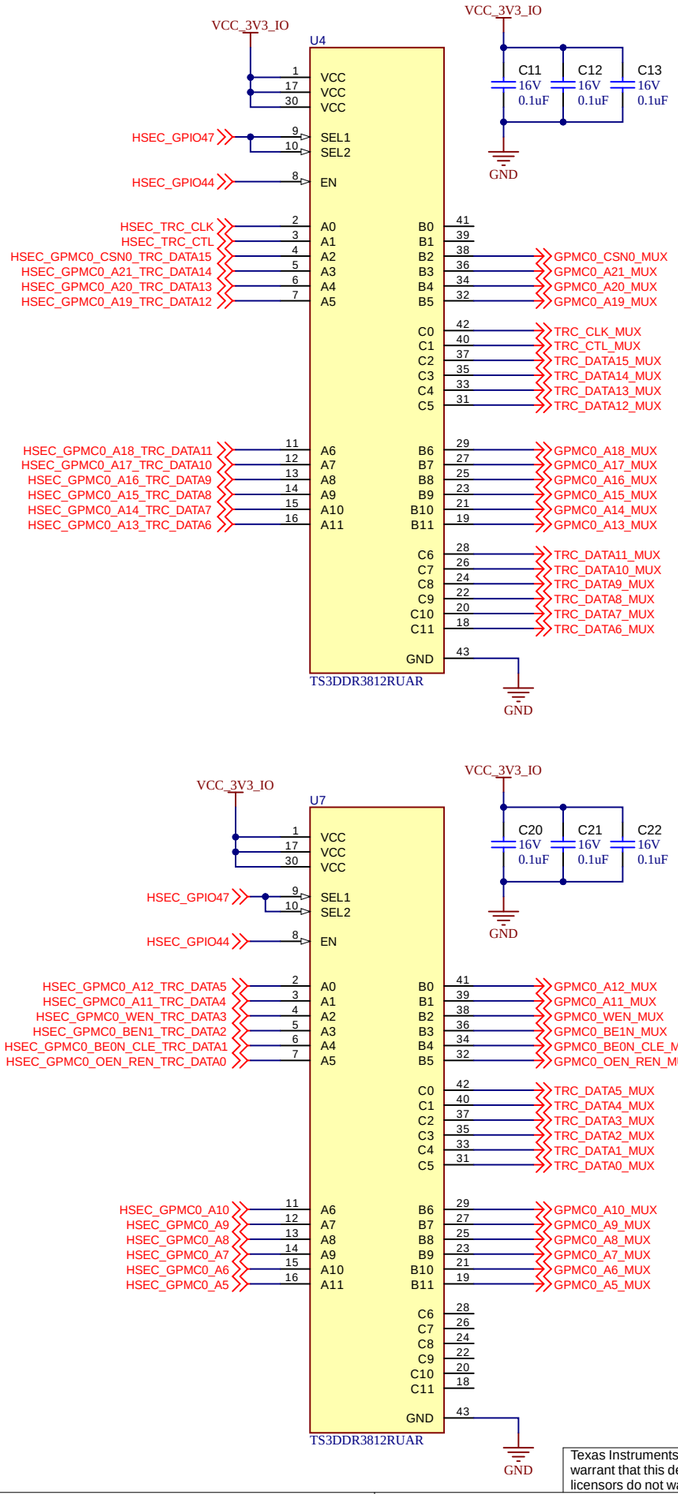
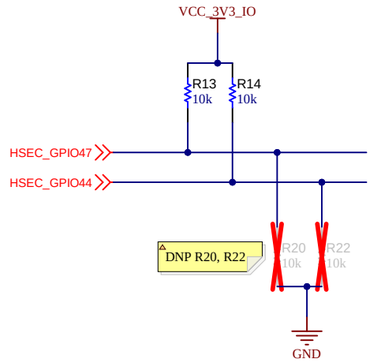
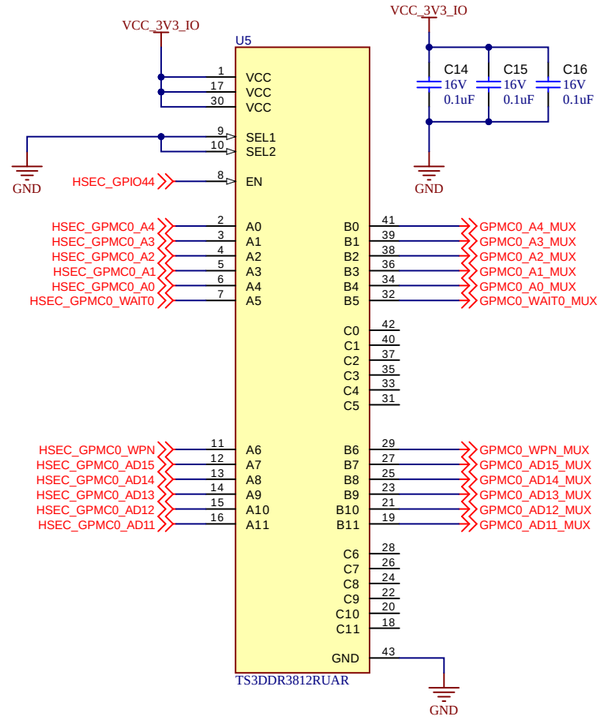
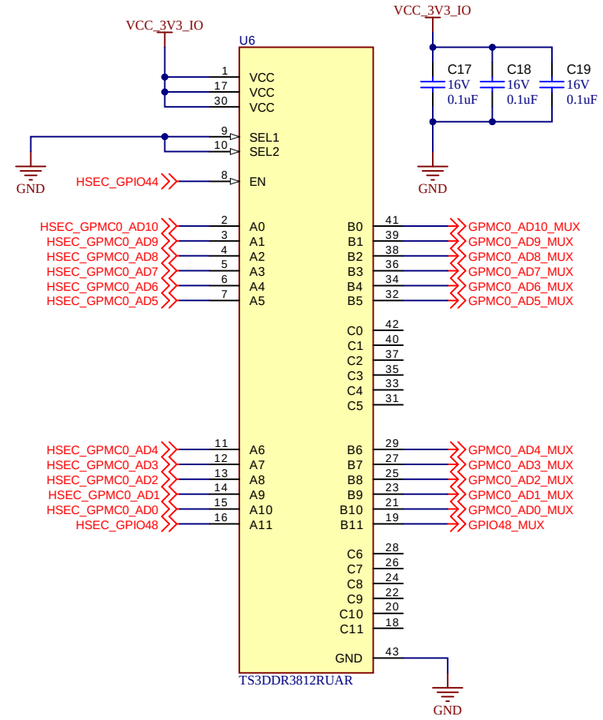
TRACE/GPMC HSEC MUX







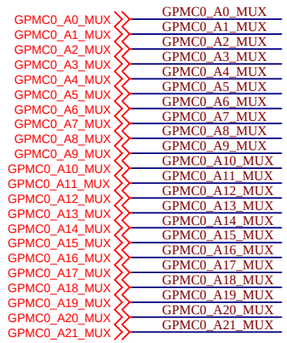


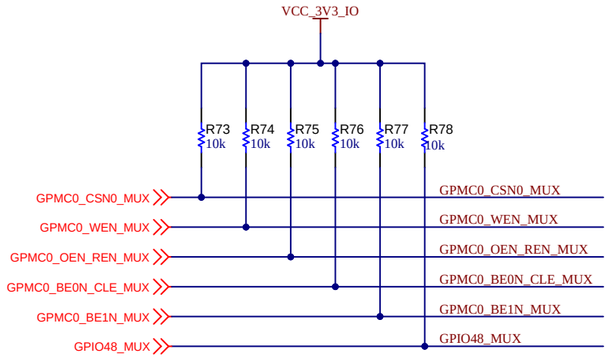
FUNCTION TABLE

EN	SEL1	SEL2	FUNCTION
L	X	X	A_0 to A_{11}, B_0 to B_{11}, and C_0 to C_{11} are Hi-Z
H	L	L	A_0 to A_5 = B_0 to B_5 and A_6 to A_{11} = B_6 to B_{11}
H	L	H	A_0 to A_5 = B_0 to B_5 and A_6 to A_{11} = C_6 to C_{11}
H	H	L	A_0 to A_5 = C_0 to C_5 and A_6 to A_{11} = B_6 to B_{11}
H	H	H	A_0 to A_5 = C_0 to C_5 and A_6 to A_{11} = C_6 to C_{11}

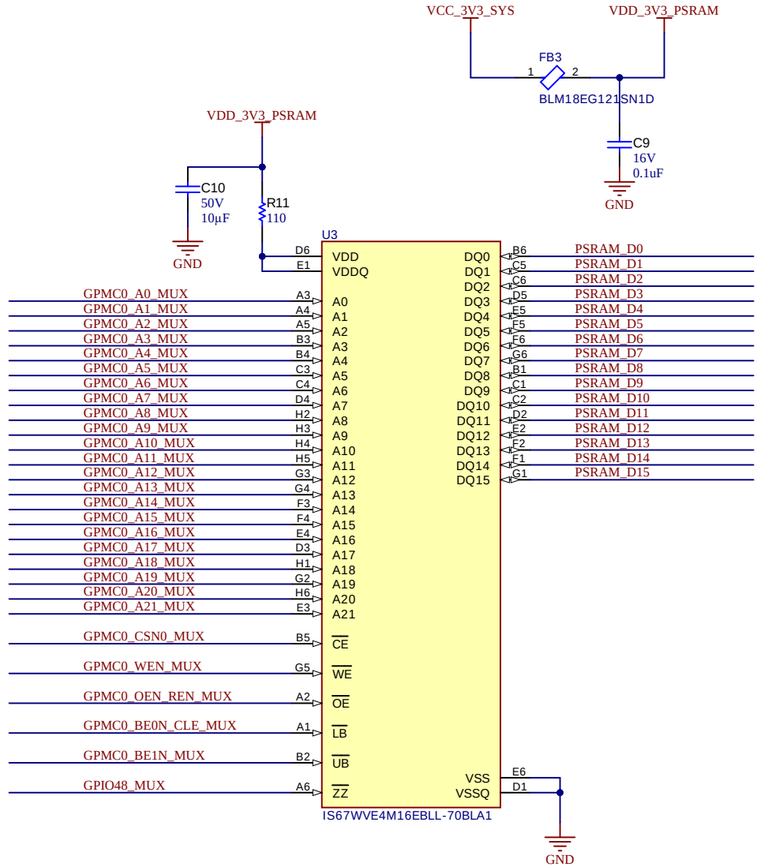
Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 10/7/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 5 of 8
Drawn By:		File: PROC148A_HSECMUX.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	http://www.ti.com

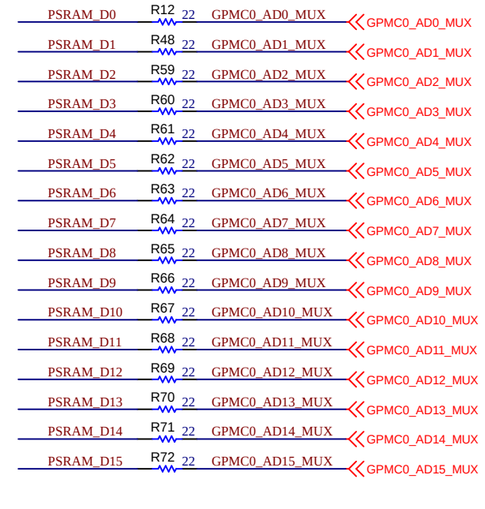
GPMC PSRAM INTERFACE





GPIO48 used for PSRAM ZZ#





Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 9/28/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 6 of 8
Drawn By:		File: PROC148A_PSRAM.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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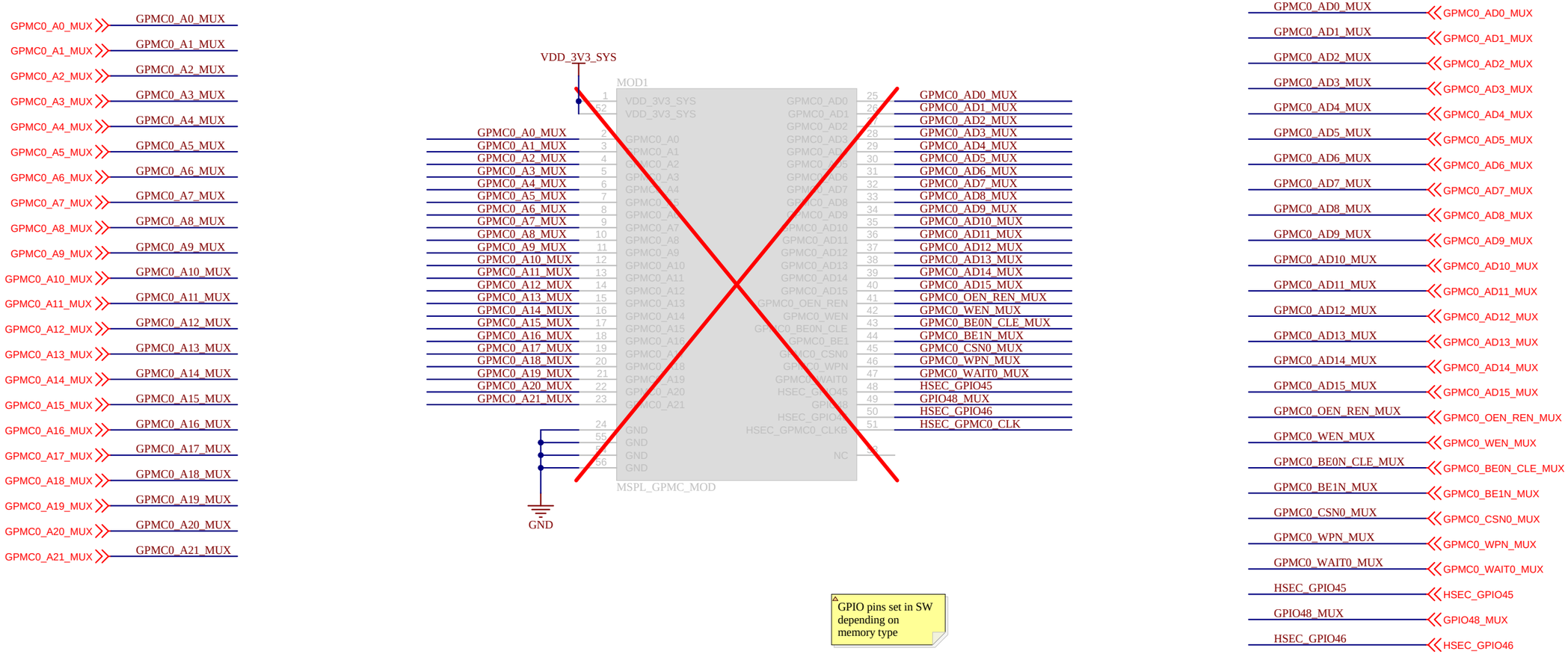
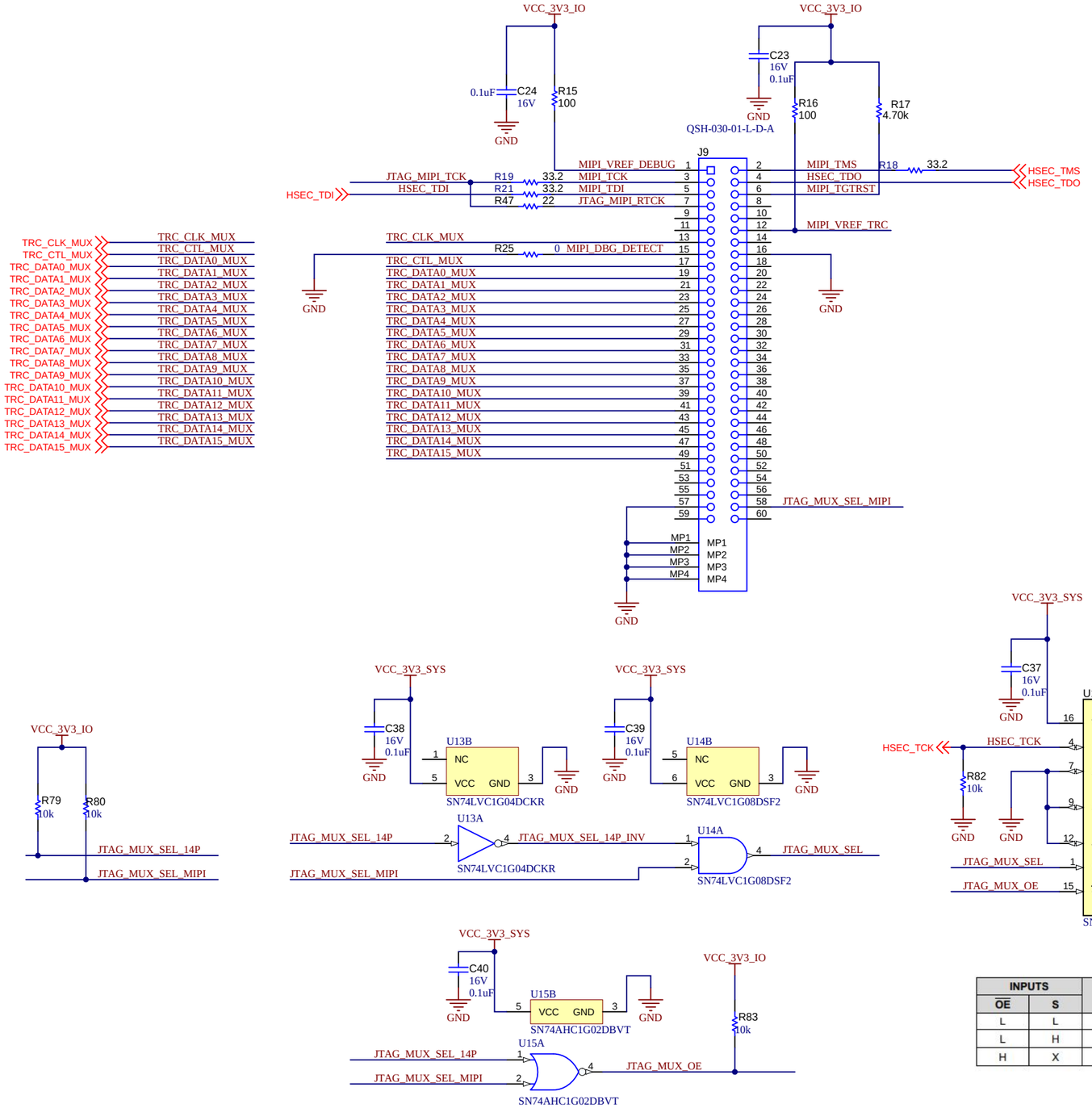
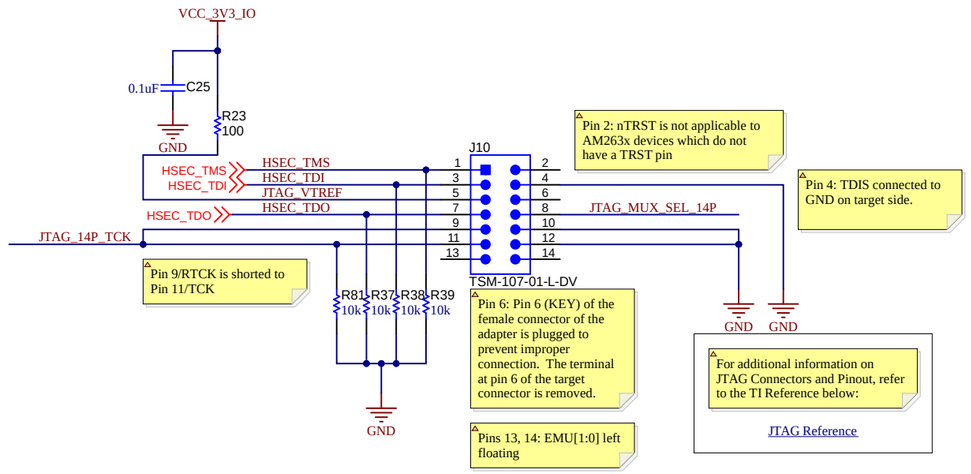
GPMC FOOTPRINT

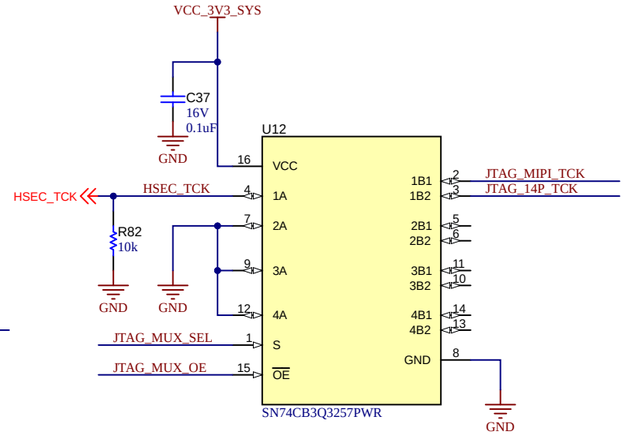


MIPI 60 PIN CONNECTOR



JTAG 14 PIN TI CONNECTOR





INPUTS		INPUT/OUTPUT A	FUNCTION
$\overline{OE}$	S		
L	L	B1	A port = B1 port
L	H	B2	A port = B2 port
H	X	Z	Disconnect

Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 9/28/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 8 of 9
Drawn By:		File: PROC148A_JTAG_TRACE.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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FID1 FID2 FID3 FID4 FID5 FID6

PCB Number: PROC148
PCB Rev: A

PCB
LOGO
Texas Instruments

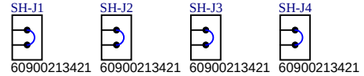
CE Mark

PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo

Selection Jumpers

SH-J1 SH-J2 SH-J3 SH-J4



60900213421 60900213421 60900213421 60900213421

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Orderable: TMDSHSECDOCK-AM263		Designed for: Public Release	Mod. Date: 9/29/2022
TID #: N/A		Project Title: TMDSHSECDOCK-AM263	
Number: PROC148	Rev: A	Sheet Title:	
SVN Rev:		Assembly Variant: 001	Sheet: 9 of 9
Drawn By:		File: PROC148A_Hardware.SchDoc	Size: B
Engineer: Brennan Hartigan		Contact: http://www.ti.com/support	

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